supports the Commission's tentative conclusion that it "should continue to decline to require collocation of equipment used to provide enhanced services." Notice at ¶ 132. Nor should the Commission permit ILECs to reserve large amounts of space for future "turn-around" replacements of existing equipment, whereby the ILEC reserves space that is roughly equal in size to the equipment that will one day need to be repaired or replaced. ILECs should not be allowed to use a "turn-around" rationale to engage in de facto warehousing of space. In addition, ILECs should be required to be more specific in their schedules to replace equipment.

CLECs should have the unfettered right to cross-connect between any CLEC collocation spaces within the same ILEC central office. Such capabilities will often be more cost efficient for individual CLECs and may have the potential of minimizing collocation space needs. Although the Commission's rules have permitted cross-connects, the ILECs have imposed requirements that make this ability burdensome and inefficient. For example, instead of permitting a CLEC to cross-connect its equipment directly with that of another CLEC, the ILEC may require that the initial connection be made to the ILEC, which the ILEC in turn connects to the second CLEC. There is no reason, however, for the ILEC to be involved in the cross-connect at all, particularly when the ILECs' involvement could lead to additional points of failure through extra cross-connections. Therefore, the Commission should end such artificially introduced inefficiency and ensure that CLECs can directly cross-connect their equipment with that of other CLECs without any unnecessary involvement by the ILEC.

3. Allocation of Collocation Space

a. Cageless Collocation

The advent of advanced services technology will likely lead to greater collocation demands from carriers as they move into new classes of data services, which could lead to overcrowding in many central offices. On the other hand, the equipment collocated at the ILEC's premises will be "of decreasing dimension and increasing functionality." CompTel White Paper at 27. The Commission should, therefore, adopt national standards for collocation space allocation that "minimize the space needed by each competing provider in order to promote the deployment of advanced services to all Americans." Notice at ¶ 137. ICG believes that "[m]ore cost-effective collocation solutions may spur collocation in residential and less densely populated areas." Id. at ¶ 138.

The national model for collocation to minimize space requirements should be cageless collocation, both in the advanced services context and generally. Such a model simultaneously increases the amount of space available for collocation and permits CLECs to achieve greater cost efficiency by providing them with an amount of space that does not exceed their needs. ILECS frequently foster inefficient use of space at their locations through various requirements, such as mandating that each collocation "cage" enclosure be a minimum of as much as 100 square feet, or prohibiting the subleasing or sharing of caged space.

To make "cageless" physical collocation work, the Commission should adopt national standards that include requiring ILECs to take affirmative steps to make more space available for CLEC equipment, such as "remov[ing] obsolete equipment and non-

critical administrative offices in central offices to increase the amount of space available for collocation." Notice at ¶ 142. The Commission should also include within its standards a provision that would make a particular CLEC responsible for only its share of the cost of preparing the collocation space, based on the percentage of the total space it is occupying, whether or not other competing CLECs or ILEC affiliates, if any, are immediately occupying the rest of the space. Of course, the individual states should have the ability to exceed the minimum collocation requirements established by the Commission's national standards.

The Commission should also adopt national standards to govern the collocation ordering process, preparation of the collocation space, and deployment of the collocated equipment. In particular, the Commission should require standardized service and installation intervals within which all ILECs must respond to CLEC collocation requests. There should be little or no lag time for the ILEC to begin acting on an order once it is received, and in the event of any misunderstanding regarding whether a particular order was made, it should be up to the ILEC – the party tasked with carrying out the order -- to rebut the presumption that the order was in fact made.[11] In addition, substantial delays in preparing collocation space are often the result of a lack of resources devoted by the ILEC

[11] ICG recently had an experience with one ILEC where ICG and the ILEC discussed by telephone on several occasions three orders by ICG for six collocations in three states. Yet, when it came time to prepare the spaces, the ILEC claimed that it had never received any of ICG's written orders, which had been sent by ICG several weeks previously. Throughout all of the previous conversations, the ILEC had given no indication to ICG that the ILEC did not have the orders in hand, even when ILEC personnel were well aware of the approaching date of deployment.

to such activities, particularly in those areas where demand for collocation is high. To address this recurring problem, the Commission should require the ILECs to identify additional third-party vendors available to prepare space as needed.

Cageless collocation can be configured in two different ways: (1) common-space cageless collocation; and (2) co-mingled/shared space cageless collocation. Common-space cageless collocation segregates ILEC equipment from that of the CLECs. Within the CLEC common area, however, the equipment of individual CLECs is not separated by cages or other dividers. With co-mingled space cageless collocation, CLEC equipment is installed in the same area as used by the ILEC. This arrangement is similar to virtual collocation, the difference being that the CLEC retains control over its equipment for purposes of upgrades, maintenance and repair.

ICG believes co-mingled space cageless collocation is the better of the two cageless alternatives. First and foremost, co-mingling lessens space exhaustion problems. Second, ILECs and CLECs are located within the same space, so there would be no non-discrimination concerns. Either alternative, however, is preferable to existing "caged" collocation.

b. Other Collocation Alternatives

The alternatives to cageless collocation suggested by the Notice, such as the use of shared collocation cages or the use of cages of any size, should be rejected because they attempt to mitigate the ILECs' over-response to a problem that is relatively minor: security of the LEC premises. The Commission should no longer permit the security tail to wag the collocation dog. Indeed, much of today's "security" concerns date to the initial period

of collocation when ILECs had far less experience in opening their networks to competitors. In any event, "security is not an absolute concept. Rather, there are different levels of security, with increasing levels of protection and cost." CompTel White Paper at 30.

The Commission's Notice evidences awareness of security solutions, such as "concealed security cameras or badges with computerized tracking systems," that would be more than adequate and cost-effective for all parties concerned. Notice at ¶ 141. With such measures in place, there is no need for either cages or security escorts. Other common-sense steps the ILEC can take to address security concerns are the proper labeling of equipment so errors by technicians are curtailed and the provision of locking cabinets (which are distinct from "cages") for those customers who prefer them.

The Commission should also reject ILEC arguments that its competitors could gather sensitive marketing data by being able to walk around the premises without an escort. Such concerns are overblown in an environment where all carriers, particularly the ILECs, trumpet their latest business plans and advanced services capabilities in frequent press releases well in advance of deployment. In sum, the Commission's tentative conclusion that "carriers should be able to resolve any security concerns raised by cageless collocation" is correct, but only if the Commission makes clear that "security" should not be a significant stumbling block and cost causer in collocating equipment.

Should the Commission choose to explore collocation alternatives other than cageless collocation, the Commission should mandate smaller physical collocation requirements (or no minimum amount of space) to avoid wasting scarce collocation space,

as it proposes in the Notice. Similarly, the Commission should remove restrictions that prevent shared collocation space through subleasing or sharing. ICG agrees with the Commission's tentative conclusion that if an ILEC offers a particular form of physical collocation at any location, "such a collocation arrangement should be presumed to be technically feasible at other LEC premises." Id. at ¶ 139.

4. Exhaustion of Collocation Space

While space exhaustion may grow as a concern for a few ILEC premises, limitations on available space should not hinder physical collocation in most ILEC locations, particularly as ILECs continue to discard large, obsolete pieces of equipment and reduce non-critical staff space. To facilitate physical collocation, the ILEC should provide information about available collocation space, including detailed floor plans of ILEC central offices, on at least a quarterly basis. This information should include locations with potential limitations on collocation. ILECs should prioritize activities to improve availability of space in Central office locations based on forecasts received from CLECs. Rather than responding to carrier requests for this information, which could lead to possible delays, the ILEC should be required to post collocation space information on a web site established specifically for that reason, which is an appropriate means of giving notice to parties only in this particular, narrowly drawn circumstance. This will allow CLECs to formulate plans according to space availability and will reduce the resources the ILEC needs to devote to responding to CLEC inquiries.

Collocation space should be assigned on a first-come, first-served basis. Carriers, including any affiliate of the ILEC, should not be permitted to warehouse space for any purpose, including the "turn-around" replacement of existing equipment.

In those locations where the ILEC reports that space is unavailable, the Commission should require that CLECs requesting collocation space be allowed to tour the ILEC's premises without charge to "enable competing providers to identify space that they believe could be used for physical collocation." Notice at ¶ 146. In the event of disagreement about the ultimate use of space at a particular premises, "both carriers could present their arguments to the state commission." Id. The state commissions should be provided with detailed floor plans that specify how the space is used within the particular location to allow a commission to engage in a constructive discussion with the carriers after the CLEC's tour of the premises.

The use of virtual collocation as an alternative to physical collocation should only be weighed as an option when the ILEC has met all other requirements under the Commission's national standards and is still unable to accommodate a CLEC's request for physical collocation. It is difficult to imagine, however, an instance where virtual collocation would be the *only* alternative, especially since the only principal difference between cageless physical collocation and virtual collocation is the CLEC's ability in the former to install, maintain, and repair its own equipment. Therefore, virtual collocation can easily be translated into cageless physical collocation by providing that access to the CLEC. In any event, to ensure that a virtual collocation offering is provided to CLECs on

non-discriminatory terms and conditions, all CLECs must be offered the same virtual collocation arrangements as the ILEC's advanced services affiliate (if any).

Finally, the Commission should prohibit ILEC policies and practices that may contribute to exhaustion of physical collocation space, such as setting minimum sizes for collocation or requiring the use of separate equipment for cross-connection to UNEs and tariffed services, even when the equipment can serve both more efficiently (such as a multiplexer). Such practices are inefficient from both a cost and a space perspective, and only serve to frustrate competition.

5. Effect on Existing Agreements

The Commission seeks comment on how its "tentative conclusions and rule proposals relating to collocation may affect existing collocation requirements." Notice at ¶ 150. ICG believes that the Commission's adoption of national standards on collocation should enable a "fresh look" at the collocation provisions in existing interconnection agreements.

B. Local Loop Requirements

1. National Standards

As with collocation of CLEC equipment at ILEC premises, the Commission should adopt national standards as minimum requirements for local loops that apply to all services. National standards would help ensure that the ILECs deploy the pre-provisioning processes, provisioning processes, and engineering processes necessary to support the policies set forth in the Act and in the Commission's rules, including the deployment of

advanced services. It is also of primary importance that ILECs be required to provision for CLECs *all* digital standards, not just the one or two standards that an ILEC itself elects to deploy (such as DSL). ICG notes that the Commission's statements to that effect in the Notice are already beginning to have a positive effect, as ILECs begin to provision for more digital standards. The Commission's national standards should pertain to nondiscriminatory access to OSS, loop spectrum management, attachment of electronic equipment at the central office end of the loop, and the unbundling of loops passing through remote terminals.

National standards would establish at least a minimum level of uniformity and predictability that would encourage the widespread deployment of advanced services by multiple providers. Investors, too, would likely be willing to commit more resources in an environment of increased stability. In this area, as well as the others, the states should retain the ability to adopt requirements in addition to the minimum requirements set forth in the Commission's national standards. The existence of national standards would also be an invaluable enforcement tool in that it would be easier for the Commission and the states to identify a situation requiring enforcement intervention. In addition, a body of experience in working with the national standards would increasingly provide the Commission and the states an ability to resolve complaints in an expedited manner.

2. Loops and OSS

ICG supports nondiscriminatory access to information concerning loops for *all* advanced services, including current information on digital loop carriers ("DLCs"). This information should be provided to CLECs through access to the same operational support

systems ("OSS"), systems that are used by the ILEC and the ILEC's affiliate (if any). As stated by the Commission, "incumbent LECs should provide requesting competitive LECs with sufficient detailed information about the loop so that competitive LECs can make an independent determination about whether the loop is capable of supporting the xDSL equipment they intend to install." Notice at ¶ 157. Such information will differ in specificity and quantity, depending on the precise technology the CLEC intends to use at any given point in time. At a minimum, the ILECs should provide CLECs with OSS access concerning the following: loop length; gauge of cable; digital loop presence; presence of load coils; presence of bridge taps or repeaters; and presence of any potential disturbers.

To ensure that the information will be of maximum utility, the Commission should require the ILEC to keep its records current and to provide information that is equivalent to that received by the ILEC or the ILEC's affiliate (if any). The ILECs generally have detailed inventory information available internally for the ILECs' deployment of its own advanced services. The information provided to CLECs, however, should not be limited to merely the particular type of advanced service deployed by the ILEC, but should concern *all* advanced services. In addition, the ILEC should be required to include within this information any plans to migrate loops to DLC configuration at least six months before the plans are put into effect. With respect to loops that are already provisioned to the CLEC for the CLEC's provision of advanced services, the ILEC should not be permitted to transition such loops to DLC configuration.

The Commission should also adopt minimum standards for the conditioning of loops to support particular CLEC requirements. ILECs have a powerful incentive to slow the effective entry of competitors.

3. Loop Spectrum Management

The Commission should adopt national standards for loop spectrum management of different signaling formats on copper pairs in the same bundle. The ILECs should not be permitted to define unilaterally the "spectral mask" in a way that will disadvantage competitors. For example, while there may be some legitimate "crosstalk" or interference concerns with digital services, spectrum management should not be geared to replicate optimal, laboratory-like conditions. The relative spectral compatibility and the level of interference that can be tolerated between digital signals should be determined by a neutral standards-setting body, as the Commission appears to recognize in the Notice. The Commission should restrain ILECs from imposing any requirements that are inconsistent with the standards ultimately set by that neutral body. Such standards should apply equally to the ILEC, the ILEC's affiliates (if any), and the CLECs.

ICG supports the right of two different service providers to offer services over the same loop. In addition, such services from the respective providers should be permitted to be different, such as mixing voice and data services, and in any combination the CLEC

chooses. To achieve a mix of services, CLECs should be allowed to use any technology, including but not limited to, a splitter at the customer's premises.[12]

4. Attachment of Electronic Equipment at Central Office End of Loop

The Commission should adopt uniform national standards, which apply to the equipment of both the ILEC and the CLEC, for electronic equipment at the central office end of a loop. Uniform standards are preferable to having each ILEC set its own requirements, which has the potential for confusion and delay.

5. Redefining the Local Loop for Advanced Services Enhancement

As advanced services technology and capabilities continue to evolve, the Commission should adopt a definition of the loop that will ensure continued CLEC access to all loop functionalities needed to offer existing and future advanced services. The definition must be fluid enough to encompass unforeseen circumstances without the necessity of seeking a formal revision from the Commission. At a minimum, the definition of "local loop," irrespective of the type of service, should encompass the loop from the customer's premises, through any remote terminals, through the ILEC central office, and to the point of collocation.

---

[12] As discussed elsewhere in these comments, ICG strongly believes that ILEC affiliates, should the Commission choose to permit them, should not be allowed to resell the ILEC's services. In the event, however, that the Commission were to permit such resale by the ILEC affiliates, ICG would support the Commission's tentative conclusion that "any voice product that the incumbent LEC provides to its advanced services affiliate would have to be made available to competitive LECs on the same terms and conditions." Notice at ¶ 162.

6. Unbundling of Loops Passing Through Remote Terminals

ICG supports the Commission's tentative conclusion that ILECs should be required to provide as UNEs DLC-delivered loops capable of transporting high-speed digital signals. There are unlikely to be situations in which offering such loops as UNEs is "technically unfeasible," although the ILEC should have the burden of proof if any instance does arise. In some cases, the DLC can be conditioned to support advanced services with no need for grooming. Conditioning might involve the change of a DLC line card to one that is compatible with the particular service to be provided by the CLEC. In the remaining cases, the ILEC should be required to groom the customer onto the dedicated copper or copper-fiber hybrid to support the service requested by the CLEC. In neither case should the existence of a DLC be an excuse for refusing to make the loop available. The ILEC should also be required to provision advanced services loops in the same manner that it provisions such loops for itself or its affiliate (if any).

ICG supports the Commission's tentative conclusion that a CLEC should be able to request any method of unbundling on the DLC-delivered loop that is technically feasible. Notice at ¶ 171. A CLEC should be able to request different methods of unbundling until such time as the ILEC satisfies the CLEC's request, and the CLEC receives an unbundling method that is at least equal in quality and functionality as the ILEC's loop. Grooming should always be an option for the CLEC, even if the ILEC has conditioned the DLC to support advanced services.

ICG supports the Commission's tentative conclusion that CLECs should not be "comparatively disadvantaged by incumbent LECs regarding provisioning of DLC-

delivered loops." Notice at ¶ 172. In particular, ICG supports the two examples the Commission gives to illustrate this principle: (1) CLECs should have access to parallel copper loops that bypass the DLC where relied upon by the ILEC or its affiliate; and (2) CLECs should be able to use a digital subscriber line multiplexer ("DSLAM") collocated at a remote terminal to provide advanced services, if the ILEC or its affiliate does so. Id. In addition, the deployment intervals for provisioning advanced services-compatible loops should be the same for ILECs and CLECs, regardless of whether the loop passes through a remote concentration device.

7. Effect on Existing Agreements

With regard to existing interconnection agreements, ICG believes that the Commission's adoption of rules on advanced services-capable loops should enable a "fresh look" at the local loop provisions within those agreements.

C. Unbundling Obligations

The Commission should analyze unbundling requirements for advanced services under both the proprietary standard in Section 251(d)(2)(A) and the impairment standard in Section 251(d)(2)(B), as either standard or both will be implicated. The Commission should declare that all network elements used by the ILEC or its affiliate in the provision of advanced services are individual UNEs. Such network elements that are to be considered UNEs include, but are by no means limited to, the DSLAM, customer ports on DSLAM, frame relay or packet-switch ports, the loop itself, and other electronics.

D. Resale Obligations

Because advanced services will be offered primarily to residential and business end users, including ISPs, the Commission should require that all telephone exchange services predominantly offered to end users as advanced services be subject to resale under Section 251(c)(4), without regard to their classification by the Commission or ILEC as telephone exchange service or exchange access. Such a finding should encompass all advanced services, including those configured in the future, and not be limited to DSL services.

Respectfully submitted,

By: 

Albert H. Kramer
Michael Carowitz
Jacob S. Farber
DICKSTEIN SHAPIRO MORIN
& OSHINSKY
2101 L Street, N.W.
Washington, DC 20037
(202) 828-2226

Attorneys for ICG Telecom Group, Inc.

Cindy Z. Schonhaut
Senior Vice President
Government and External Affairs
ICG Communications, Inc.
161 Inverness Drive West
Englewood, CO 80112
(303) 414-5464

September 25, 1998

ICG Telecom Group, Inc.
September 25, 1998
CC Docket No. 98-147

CERTIFICATE OF SERVICE

I hereby certify that on September 25, 1998, a copy of the foregoing Comments of ICG Telecom Group, Inc. was hand-delivered to the following:

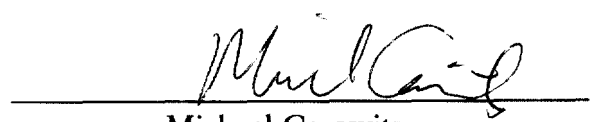
Kathryn Brown, Chief
Common Carrier Bureau
Federal Communications Commission
1919 M Street, N.W.
Room 500
Washington, D.C. 20554

Larry Strickling, Deputy Chief
Common Carrier Bureau
Federal Communications Commission
1919 M Street, N.W.
Room 500
Washington, D.C. 20554

Carol Mattey, Chief
Policy and Program Planning Division
Common Carrier Bureau
Federal Communications Commission
1919 M Street, N.W.
Room 544
Washington, D.C. 20554

Janice Myles
Policy and Program Planning Division
Common Carrier Bureau
Federal Communications Commission
1919 M Street, N.W.
Room 544
Washington, D.C. 20554

ITS, Inc.
1231 20th Street, N.W.
Washington, D.C. 20037



Michael Carowitz